EXHIBIT 5

Attorney Docket No.: P3221US00   *Patent*

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of: Yiming MA *et al.*	Confirmation No.: 1715
Application No.: 12/565,573	Examiner: Kwasi KARIKARI
Filed: September 23, 2009	Group Art Unit: 2641

For: METHOD AND APPARATUS FOR INCREMENTALLY DETERMINING
        LOCATION CONTEXT

MAIL STOP AF
Commissioner for Patents
Alexandria, VA 22313-1450

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RESPONSE UNDER 37 C.F.R. § 1.116

</div>

Dear Commissioner:

In response to the Final Office Action dated August 9, 2013, please reconsider the above-

identified application based on the following:

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AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims.

1. (Currently Amended) A method comprising:

causing at least in part a receiving of signal data that indicates a set of one or more distinct

signal sources from which signals are received at a mobile device for each of a plurality

of different times;

determining whether the mobile device is moving outside a specified area at a current time of

the plurality of different times based on the signal data;

if the mobile device is determined to be not moving outside the specified area, then causing

at least in part an incrementing of a count for a stationary state associated with the set of

one or more distinct signal sources at the current time; [[and]]

determining a primary set of stationary states, each stationary state in the primary set

associated with a frequently incremented count for one or more similar sets of one or

more distinct signal sources when the mobile device is not moving outside the specified

area; and

causing at least in part initiation of delivery of a service to the mobile device based on the

stationary state.

2. (Original) A method of claim 1, wherein determining whether the mobile device is moving

outside the specified area comprises determining whether a measure of similarity, between a first

set of one or more distinct signal sources in a time window ending at the current time and a

second set of one or more distinct signal sources in a time window ending at a time earlier than

the current time, is below a movement threshold.

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3. (Original) A method of claim 1, wherein incrementing the count for the stationary state further comprises:

determining a conditional probability for each wireless transmitter of the set of wireless transmitters given an extant stationary state;

determining a conditional probability for the extant stationary state given the set of one or more distinct signal sources based on the conditional probability for each wireless transmitter of the set of wireless transmitters given the extant stationary state; and

updating a count of the extant stationary state if the conditional probability for the extant state given the set of one or more distinct signal sources is greater than a cluster threshold.

4. (Canceled)

5. (Currently Amended) A method of ~~claim 4,~~ claim 1, further comprising determining a transition state associated with a change from a first stationary state to a second stationary state of the primary set of stationary states.

6. (Original) A method of claim 5, wherein the first stationary state is identical to the second secondary state.

7. (Original) A method of claim 5, wherein determining the transition state further comprises incrementing a count for the transition state, wherein the count is associated with duration in the first stationary state and a timing context when the transition state is determined.

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8. (Original)) A method of claim 5, further comprising predicting the transition state based on a last stationary state before the current time and a time context for the current time and a history of occurrence of the transition state, wherein delivering the service to the mobile device based on the stationary state further comprises delivering the service based on the predicted transition state.

9. (Original) A method of claim 1, wherein delivering the service to the mobile device based on the stationary state further comprises determining a type of service based on communications by the user during the stationary state.

10. (Original) A method of claim 5, wherein delivering the service to the mobile device based on the stationary state further comprises determining a type of service based on a transition state that includes the stationary state.

11. (Original) A method of claim 5, further comprising predicting the transition state by:

determining a most probable transition state at the current time; and

determining a most probable transition state at a future time given the most probable transition state at the current time.

12. (Currently Amended) An apparatus comprising:

at least one processor; and

at least one memory including computer instructions, the at least one memory and computer instructions configured to, with the at least one processor, cause the apparatus at least to:

cause at least in part a receiving of signal data that indicates a set of one or more distinct

signal sources from which signals are received at a mobile device for each of a

plurality of different times;

determine whether the mobile device is moving outside a specified area at a current time

of the plurality of different times based on the signal data;

if the mobile device is determined to be not moving outside the specified area, then

incrementing a counter for a stationary state associated with the set of one or more

distinct signal sources at the current time; [[and]]

determine a primary set of stationary states, each stationary state in the primary set

underline associated with a frequently incremented count for one or more similar sets of one or

more distinct signal sources when the mobile device is not moving outside the

specified area; and

cause at least in part initiation of delivery of a service to the mobile device based on the

stationary state.

13. (Original) An apparatus of claim 12, wherein determining whether the mobile device is

moving outside the specified area comprises determining whether a measure of similarity,

between a first set of one or more distinct signal sources in a time window ending at the current

time and a second set of one or more distinct signal sources in a time window ending at a time

earlier than the current time, is below a movement threshold.

14. (Original) An apparatus of claim 12, wherein incrementing the count for the stationary

state further comprises:

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determining a conditional probability for each wireless transmitter of the set of wireless

transmitters given an extant stationary state;

determining a conditional probability for the extant stationary state given the set of one or

more distinct signal sources based on the conditional probability for each wireless

transmitter of the set of wireless transmitters given the extant stationary state; and

updating a count of the extant stationary state if the conditional probability for the extant state

given the set of one or more distinct signal sources is greater than a cluster threshold.

15. (Canceled)

16. (Currently Amended) An apparatus of ~~claim 15,~~ claim 12, the at least one memory and computer instructions further configured to, with the at least one processor, cause the apparatus at least to determine a transition state associated with a change from a first stationary state to a second stationary state of the primary set of stationary states.

17. (Original) An apparatus of claim 16, the at least one memory and computer instructions further configured to, with the at least one processor, cause the apparatus at least to predict the transition state by:

determining a most probable transition state at the current time; and

determining a most probable transition state at a future time given the most probable

transition state at the current time.

18-20. (Canceled)

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REMARKS

Claims 1-17 are pending in this Application, of which claims 1, 5, 12, and 16 are currently amended, and claims 4, 15, and 18-20 are canceled without prejudice or disclaimer. No claims are currently amended.   No new matter is introduced.

The Final Office Action mailed August 9, 2013:

1)   rejected claims 1, 2, 9, 12, and 13 as being obvious under 35 U.S.C. § 103(a) based on *Gummadi et. al*., (U.S. 2008/0233945, hereinafter, *Gummadi*) in view of *Smith et al,* (U.S 2003/0006911, hereinafter, *Smith*); and

2)   objected to claims 3-8, 10, 11, and 14-17 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The objections and rejection are respectfully traversed.

A.   35 U.S.C. §103(a) Rejection of Claims 1, 2, 9, 12, and 13

With respect to the rejection of independent claim 1, and for at least the reasons previously argued, Applicants submit that *Gummadi* and *Smith*, taken individually or in combination, do not teach or render obvious "**signal data that indicates a set of one or more distinct signal sources from which signals are <u>received at a mobile device</u> for each of a plurality of different times**," wherein a "**determining whether the mobile device is moving outside a specified area at a current time of the plurality of different times <u>based on the signal data</u>**," as recited in independent claim 1.   Independent claim 12 recites similar features in varying scope.

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However, in an effort to expedite prosecution and to reduce issues for potential appeal, Applicants have amended independent claims 1 and 12 to recite the allowable features of now canceled claims 4 and 15, respectively.

Therefore, in summary, at least for the foregoing reasons, independent claims 1 and 12 are not rendered obvious by the combination of *Gummadi* and *Smith* and are patentable. Dependent claims 2 and 9 and 13, which variously depend from independent claims 1 and 12, also are patentable, at least in view of the patentability of independent claims 1 and 12, as well as for the additional features these claims recite. Accordingly, withdrawal of the rejections is respectfully requested.

B.   Objections to Claims 3-8, 10, 11, and 14-17

Applicants greatly appreciate the Office Action Action's indication that the claims 3-8, 10, 11, and 14-17 are allowable. As discussed above, independent claims 1 and 12 are amended to recite the features of now canceled claims 4 and 15, respectively. Thus, all pending claims are allowable and withdrawal of the objections is respectfully requested.

C.   Withdrawn Claims 18-20

As discussed above, Applicants have canceled previously withdrawn claims 18-20 without prejudice or disclaimer.

Conclusion

Therefore, the present application overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any

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unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 519-9952 so that such issues may be resolved as expeditiously as possible.

As Applicants' remarks with respect to the Examiner's rejection and objections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, ability to combine references, assertions as to patentability of dependent claims) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions in the future.

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    To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made.   Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 504213 and please credit any excess fees to such deposit account.

Respectfully Submitted,

DITTHAVONG MORI & STEINER, P.C.

November 12, 2013   /Lenwood Faulcon, Jr./
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